

ST. GERMAIN DITCH
Lower Rapid Valley Irrigation Ditches
On the North Side of Rapid Creek
Caputa Vicinity
Pennington County
South Dakota

HAER No. SD-10

HAER
SD
52-RACI.V,
9-

PHOTOGRAPHS
WRITTEN HISTORICAL AND DESCRIPTIVE DATA

HISTORIC AMERICAN ENGINEERING RECORD
Rocky Mountain Regional Office
National Park Service
P.O. Box 25287
Denver, Colorado 80225-0287

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I. INTRODUCTION

Location: The St. Germain Ditch is located on the north side of Rapid Creek in Pennington County, South Dakota, between Caputa and Farmingdale, in the vicinity of Rapid City

Quad: Box Elder, Hermosa NE, and Caputa

UTM: Zone 13
Diversión: 659330 E, 4873830 N
Terminus: 43°58'45" Lat., 102°54'47" Long.

Date of Construction: c. 1890

Present Owner: St. Germain Irrigating Company
c/o Jerry Marsh
HCR 36 Box 35
Caputa, South Dakota 59725

Present Use: Irrigation

Significance: The St. Germain Ditch is significant for its association with the development of irrigated agriculture in South Dakota. The ditch is a representative example of irrigation systems constructed, maintained, and operated by farmers.

Historian: Lon Johnson
Renewable Technologies, Inc.
Butte, Montana 59701
February 1994

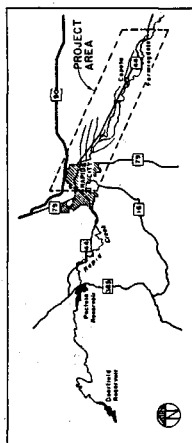
II. HISTORY

The St. Germain Ditch is located in the Lower Rapid Valley, just east of Rapid City, South Dakota. (See map on page 3). The ditch diverts water from Rapid Creek, a major tributary of the Cheyenne River, which flows through the valley. The valley is about 40 miles long, and from one to two miles wide. By 1878, farmers occupied the valley floor from Rapid City east for a distance of ten miles. These farmers, individually and in groups, began digging irrigation ditches from Rapid Creek to bring water to their crops. Over the next decade, most of the ditches became part of farmer-owned ditch corporations. The stockholders of these corporations worked together to expand, operate, and maintain the ditches. Of the 12 or so ditch companies that have operated in the Lower Rapid Valley, seven continue to provide water to about 9,000 acres. (See HAER No. SD-5 for a historical narrative of the Lower Rapid Valley irrigation ditches.) The St. Germain Irrigating Company was among the last companies organized in the valley.

The St. Germain Irrigating Company filed articles of incorporation on October 21, 1890. The corporation was authorized to issue \$10,000 in capital stock divided into 2000 shares. The original directors were Oliver St. Germain, Thomas Taylor, and George Simmers.¹

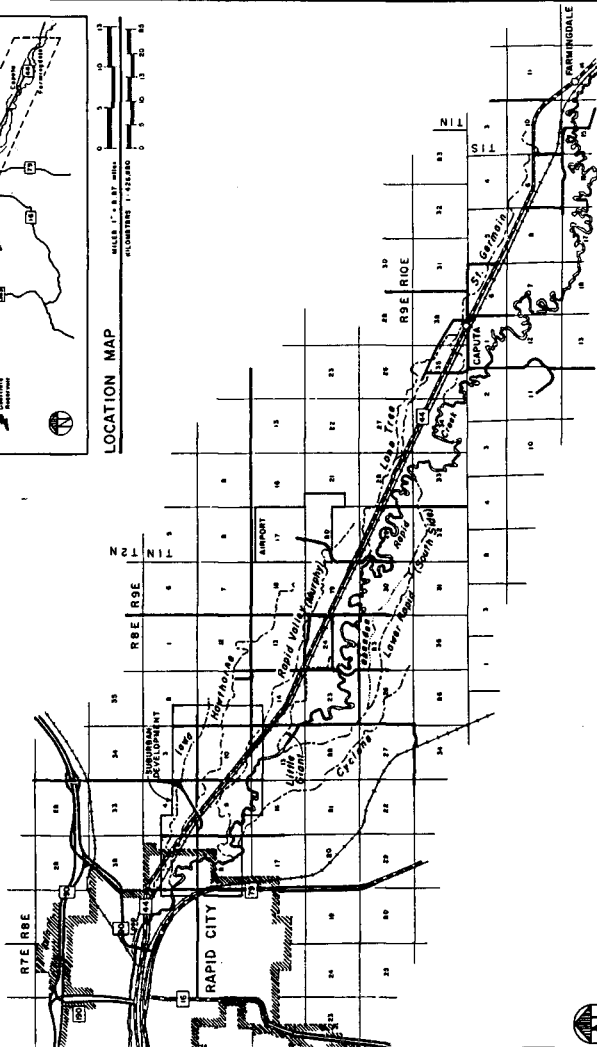
At their second meeting, held on October 31, 1890, the directors voted to purchase the water right and ditch of Oliver St. Germain for \$2,000. They also authorized the president and secretary of the company to "secure the right-of-way...over the line surveyed by Chas. Caton, and to use such means as may be necessary to secure such right of way."² This was for a three mile extension of St. Germain's ditch.³

The first stock in the company was issued on June 11, 1891. Each director received two shares. Eleven hundred shares were given to Oliver St. Germain in payment for his deed to the ditch. The remaining 883 shares were placed with a trustee to be used for purchasing ditch right-of-way. The shares remaining after the right-of-way was secured were to be turned over to Oliver St. Germain, apparently as compensation for constructing the ditch extension.⁴



LOCATION MAP

1" = 0.57 miles
1" = 0.93 kilometers



1" = 0.57 miles
1" = 0.93 kilometers

PROJECT AREA MAP

The company's minutes indicate that St. Germain had some difficulty in securing the ditch right-of-way. In 1892, the directors accepted St. Germain's work on the ditch, while noting that the right-of-way issue remained unresolved. They released the stock held in trust, but required that St. Germain deposit 300 shares with the company secretary as a surety bond. The company released part of the stock in 1895, and the remaining amount in 1897.⁵

Through the 1890s, the stockholders of the St. Germain Irrigating Company met once a year to elect directors and set the annual assessment. Ownership of stock appears to have been fairly evenly distributed. For example, in 1896, five individuals held between 20 and 70 shares, four individuals held between 167 and 170 shares, and one person held 216 shares. Annual assessments during this decade ranged between five and ten cents per share, and could be paid in a variety of ways. Most farmers worked on the ditch; their accounts were credited with \$1.50 per day of labor. Others, however, paid in cash, grain, or construction materials.⁶

In 1892, the directors voted to install turnout boxes in the St. Germain ditch "to divide the water." The minutes specified that the

boxes be made the width of the ditch on the bottom, at the point that the box is placed. To be made of 1½ in. lumber 6 ft. long, 2 ft. high on sides. ...the bottom on a grade with the bottom of main ditch. The water to be sent from the side of ditch by a skirting board placed parallel with the main ditch.⁷

The question of the location of turnout boxes in relation to the bottom of the main ditch came up in 1897. The directors appointed a committee to examine all boxes and notify the owners if they needed to be relocated. The committee was also charged with insuring that all boxes were "set on grade of the ditch." The farmers were responsible for lining the bottom of the main ditch with stones or lumber for a distance of 12 feet on either side of the turnouts to protect the main ditch from scouring.⁸

The St. Germain Irrigating Company received extensions of its corporate charter in 1905, 1925, 1945, and 1967.⁹

In 1937, the Bureau of Reclamation found that 2,650 irrigable acres could be served by the St. Germain Ditch, although water shortages limited actual acres irrigated to about one-half that number.¹⁰ In 1989, the St. Germain Ditch provided water to 1,527 acres.¹¹

III. DESCRIPTION

The St. Germain Ditch diverts water from the north side of Rapid Creek near the center of the east half of Section 34, T1N, R9E, just to the south of U.S. Highway 40. Water flows from Rapid Creek into an intake channel.

The headgate structure dates from c. 1960. It consists of a 10-foot long concrete wall with flared wings. Mounted against the central portion of the structure is a canal gate. It consists of a gate in a welded angle iron frame. The gate is raised and lowered in the frame by a threaded stem and cast iron handwheel. Cast in the 2-foot diameter wheel is the maker's mark: SHERIDAN IRON WORKS, SHERIDAN, WYO, S523. The frame extends eight-feet above the top of the concrete structure; the wheel is reached by means of a small wooden bridge spanning from the ground to a crossbar.

The two Marsh turnouts are the only historic in-canal structures known to remain in the Rapid Valley. They are located to either side of a gravel road that crosses the St. Germain Ditch on the line between Sections 5 and 6, T1S, R10E.

The turnouts are simple reinforced concrete structures placed in the main St. Germain Ditch canal. Their date of construction is unknown, although they were in-place in 1941.¹² Both are "L" shaped concrete boxes; the water being delivered to the fields by removing the wood flashboards in one leg of the "L". The western structure has a concrete bottom and measures 8'-0" long in the canal and is 5'-9" wide. The distributing box, perpendicular and at the east end of the structure, is 11'-0" long and measures 2'-8" wide. The concrete walls are 17" high and were formed only on the inside; the outer walls were poured directly against the earth. Channels near the south end of the distributing box permit the installation of flashboards. In the 1970s, a 6'-4" concrete addition was added to the downstream end of the structure in the main canal. The eastern structure is identical in construction except for its smaller size. The structure measures 8'-0" along the main canal and is 5'-0" wide. The distributing box is 7'-0" long and measures 1'-10" wide.

The St. Germain Ditch is five miles long. The diversion canal takes water from Rapid Creek at an elevation of about 2920 feet near the middle of the east half of Section 34, T1N, R9E. The canal then heads in a southeasterly direction through Sections 35 and 36 T1N, R9E and Sections 6, 5, 8, 9, T1S, R10E. Near the center of Section 10, the ditch strikes a draw at about elevation 2850 where a wasteway returns excess water to Rapid Creek.

IV. FUTURE OF THE PROPERTY

The United States Department of Agriculture Water Quality Hydrologic Unit Area, Lower Rapid Creek Project, in Pennington County, South Dakota, was approved for funding by the Secretary of Agriculture in December of 1990. The St. Germain Ditch may be affected as part of the project.

See HAER No. SD-5 for a full description of the undertaking.

V. ENDNOTES

1. South Dakota Secretary of State, "Articles of Incorporation," filed 31 October 1890, File No. DB-5878.
2. St. Germain Irrigating Company, Minute Book, 31 October 1890.
3. Jerry Marsh, Interview by Lon Johnson, 12 June 1993.
4. St. Germain Irrigating Company, Minute Book, 11 June 1891.
5. Ibid., 23 January 1892, 22 April 1895, 21 January 1897.
6. See: St. Germain Irrigating Company, Minute Book, for this decade.
7. Ibid., 30 May 1892.
8. Ibid., 30 January 1897.
9. South Dakota Secretary of State, "Application for Extension of Corporate Charter," 28 July 1905; South Dakota Secretary of State, "Application of St. Germain Irrigating Co. for an Extension of Its Corporation Charter," filed 19 August 1925; South Dakota Secretary of State, "Application of St. Germain Irrigating Company for an Extension of its Corporation Charter, filed 6 September 1945; South Dakota Secretary of State, "Articles of Amendment to the Articles of Incorporation of St. Germain Irrigating Company, filed 10 May 1967; File No. DB-5878.
10. U.S. Department of the Interior, Bureau of Reclamation, "Report on Rapid Valley Irrigation Project South Dakota," November 1937, 40. Copy in Library, Bureau of Reclamation, Newell.
11. U.S. Department of the Interior, Bureau of Reclamation, "Rapid Valley Water Management Study Appendix," Appendix J, July 1990. Copy in Soil Conservation Service office, Rapid City, South Dakota.
12. Jerry Marsh.

VII. SELECTED BIBLIOGRAPHIC CITATIONS

Marsh, Jerry. Interview by Lon Johnson, 12 June 1993.

St. Germain Irrigating Company. Minute Book

South Dakota Secretary of State. "Application of St. Germain Irrigating Co. for an Extension of Its Corporation Charter," filed 19 August 1925. File No. DB-5878.

_____. "Application of St. Germain Irrigating Company for an Extension of its Corporation Charter, filed 6 September 1945. File No. DB-5878.

_____. "Application for Extension of Corporate Charter." 28 July 1905. File DB-5878.

_____. "Articles of Amendment to the Articles of Incorporation of St. Germain Irrigating Company, filed 10 May 1967. File No. DB-5878.

_____. "Articles of Incorporation," filed 31 October 1890. File No. DB-5878.

U.S. Department of the Interior. Bureau of Reclamation. "Rapid Valley Water Management Study Appendix," Appendix J, July 1990. Copy in Soil Conservation Service office, Rapid City, South Dakota.

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